

# Exploratory SAE Opportunities

The following Exploratory SAE Opportunities are only suggestions, activities may be adapted to the learning style, career interest, background, and experience of the student or different requirements may be added by the instructor to provide a unique activity for each individual student. Students are encouraged to be creative and take an active role in selecting their activities.

## Plant/Crop Science

- Seed collection (Mount and Label) – number to be specified
- Plant collection (Mount and Label) – number to be specified
- Soil texture sample collection (verify texture by using the mason jar test)
- Munsel color testing kit
- Insect collection (Mount and Label) – number to be specified
- Write a letter to a college or university about career opportunities and majors in plant and crop science
- Job shadow a career in the plant/crop science industry. Examples:
  - Soil scientist with NRCS, University Extension, MDC, and DNR
  - Agronomist
  - Local seed dealer
  - Fertilizer sales representative
  - Seed house
  - Chemical sales representative

## Animal Science

- Time line for any species from conception to processing
- Management calendar for any species
- Animal ID and characteristics (with pictures and labels) – number to be specified
- Fish ID (photos with each fish properly identified) – number to be specified
- Breed/Pedigree identification with pictures and labels
- Develop a yearly breeding program for any species
- Nutrition program and health management for any species
- Write a letter to a college or university about career opportunities and majors in animal science
- Job shadow a career in the animal science industry. Examples:
  - Feed store
  - Stock yards
  - Livestock producer
  - Veterinarian
  - Livestock extension specialist
  - Animal health sales representative
  - Artificial Insemination licensed technician
  - Dairy
  - Seed stock producer
  - Ferrier

## **Natural Resources**

- Collect samples or pictures of native Missouri animals, trees, grasses, birds, etc.
- Acorn Collection (Mount and Label) – number to be specified
- Products of natural resources (collection) – number to be specified
- Leaf collection (Mount and Label) – number to be specified
- Feather collection (Mount and Label) – number to be specified
- Seed collection (from various trees, mount and label) – number to be specified
- Soil texture samples from various landscapes
- Plaster of Paris wildlife track collection (Label) – number to be specified
- Write a letter to a college or university about career opportunities and majors in natural resources
- Job shadow a career in the natural resources industry. Examples:
  - Conservation agent
  - NRCS
  - University Specialist
  - Missouri Water Patrol
  - Wildlife biologist
  - Fisheries biologist
  - Hatchery
  - Park ranger
  - Professional trapper

## **Horticulture**

- Take plant cutting in the greenhouse for production
- Landscaping plan and materials list
- Plant collection (Mount and Label) – number to be specified
- Twig, bark and fruit collection (Mount and Label) – number to be specified
- Landscaping plant ID (pictures and include in the label the plant's required temperature, shade requirements, and ideal planting location)
- Design a landscaping plan using a landscape computer program
- Design and/or construct hydroponics project
- Design and/or construct a propagation bench for a greenhouse
- Write a letter to a college or university about career opportunities and majors in Horticulture
- Job shadow a career in the horticulture industry. Examples:
  - Florist
  - Greenhouse manager
  - Commercial greenhouse/nursery
  - Landscaper
  - Supply service and distribution
  - Home Depot
  - Lowe's
  - Grocery store produce manager

### **Agricultural Mechanization**

- Welding equipment ID and usage (Pictures and Labels)
- Identify the requirements of a licensed and certified welder
- Identify industrial gasses and include uses, properties and hazards
- Nail ID collection (usage chart)
- Electric wire collection (Mount and Label)
- Diagram how the engine works
- Screw and bolt ID collection (usage chart)
- Cut away of a model engine showing how it works
- Layout and design of a shop of your choice
- Write a letter to a college or university about career opportunities and majors in Agricultural Mechanization
- Job shadow a career in the Agricultural Mechanization industry. Examples:
  - Hardware store
  - Small gas engine distribution center
  - Steel supply dealer
  - Metal fabrication
  - Automotive dealer / mechanic
  - Tractor and part dealer

### **Agricultural Business/Sales/Marketing**

- Marketing plan
- Advertisement plan for a local business or for your FFA chapter fundraiser
- Marketing time line for livestock or crop species
- History of the stock market
- Report on a Agribusiness
- Stock tracking
- Sales presentation on a product
- Write a letter to a college or university about career opportunities and majors in Agricultural Business/Sales/Marketing
- Job shadow a career in the Agricultural Business/Sales/Marketing industry. Examples:
  - Farm Bureau
  - Individuals that are dealers, traders and involved in sales
  - Commodity broker
  - Auctioneer
  - Agriculture bank
  - Loan officer
  - Agriculture broad caster

### **Food Science**

- Identify agriculture raw materials that go into commercial products
- Research and present on value added products
- Meat ID collection (Pictures and Label) – number to be specified
- Time line for any species from conception to processing (from gate to plate)

- Cheese ID (Pictures and Label with characteristics) – number to be specified
- Country cured ham
- Write a letter to a college or university about career opportunities and majors in Food Science
- Job shadow a career in the Food Science industry. Examples:
  - Meat cutter
  - Butcher shop
  - Dairy processing plant
  - Grocery store manager
  - Meat inspector
  - Grain processing
  - Orchard manager
  - Health inspector
  - Restaurant manager

### **Leadership and Communication**

- Create a newspaper article for your chapter
- Chapter activity power point presentation
- FFA history chart/time line
- Personal portfolio
- Parent letters
- Franklin Covey (report on the system and the philosophy)
- Create a Successorie – number to be specified
- Adventure learning activity (create and build)
- Develop a scrapbook for your FFA chapter
- Write a letter to a college or university about career opportunities and majors in Leadership / Communication
- Job shadow a career in the Leadership / Communication. Examples:
  - Radio
  - Newspaper reporter or editor
  - T.V. reporter
  - Farm Bureau
  - Representative or Senator
  - Director of Communication for a commodity group